

COURSE OBJECTIVES:

To impart knowledge on the following topics

- To facilitate the understanding of the behavior cement.
- To know about the various test procedures on Fine aggregates
- To know about the various test procedures on Coarse aggregates
- To know about the various test procedures on Bricks.
- To understand applications various construction materials.

LIST OF EXPERIMENTS:**I. TESTS ON CEMENT**

- a. Determination of fineness of cement
- b. Determination of consistency of cement
- c. Determination of specific gravity of cement
- d. Determination of setting time of cement

II. TESTS ON FINE AGGREGATE

- a. Determination of specific gravity of fine aggregate
- b. Determination of grading of fine aggregate
- c. Determination of compacted and loose bulk density of fine aggregate

III. TESTS ON COARSE AGGREGATE

- a. Determination of impact value of coarse aggregate
- b. Determination of elongation index and flakiness index of coarse aggregate
- c. Determination of aggregate crushing value of coarse aggregate
- d. Determination of specific gravity and water absorption of coarse aggregate

IV. TESTS ON BRICKS

- a. Determination of compressive strength of bricks
- b. Determination of water absorption and efflorescence of bricks

LIST OF EQUIPMENTS FOR A BATCH OF 30 STUDENTS:

Sl.No.	Description of Equipment	Quantity
1.	Vicat Appratus	1
2.	Le chatelier Appratus	1
3.	Pycnometer	1
4.	Weighing Balance	1
5.	Compression testing machine	1
6.	Aggregate impact testing machine	1
7.	Length Gauge	1
8.	Thickness Gauge	1
9.	Aggregate Crushing Value Apparatus	1
10.	Trovels and planers	1 Set
11.	Sieves	1 Set

TOTAL: 45 PERIODS

COURSE OUTCOMES:

- 1. The students will have the required knowledge in the area of testing of construction materials.
- 2. Will be able to test the quality of cement.
- 3. Will be analyze the properties of fine aggregate.
- 4. Will be analyze the properties of coarse aggregate.
- 5. Will be able to test brick's quality.

REFERENCES:

1. Construction Materials Laboratory Manual, Anna University, Chennai-600 025.
2. IS 4031 (Part 1) – 1996 – Indian Standard Method for determination of fineness by dry sieving.
3. IS 2386 (Part 1 to Part 6) – 1963 – Indian Standard methods for test for aggregate for concrete.
4. IS 383 — 1970 Indian Standard specification for coarse and fine aggregates from natural sources for concrete.

CE3367	PROGRAM OUTCOMES												PSO			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
CO1	3	-	-	-	-	-	2	1	2	2	0	2	2	-	1	3
CO2	3	-	-	-	-	-	2	1	2	0	0	2	2	-	1	3
CO3	3	2	-	-	-	-	0	1	2	0	2	0	2	-	1	3
CO4	3	2	-	-	-	-	2	1	2	0	0	2	2	-	1	3
CO5	3	-	-	-	-	-	2	1	2	2	0	2	2	-	1	3
Average	3.0	2.0	-	-	-	-	1.6	1.0	2.0	0.8	0.4	1.6	2.0	-	1.0	3.0